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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,254	04/21/2005	Chris Speirs	CH02 0033 US	8626

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NXP, B.V.
NXP INTELLECTUAL PROPERTY DEPARTMENT
M/S41-SJ
1109 MCKAY DRIVE
SAN JOSE, CA 95131

EXAMINER

MCCOMMAS, STUART S

ART UNIT	PAPER NUMBER
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4115

NOTIFICATION DATE	DELIVERY MODE
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12/13/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No. 10/532,254	Applicant(s) SPEIRS, CHRIS	
	Examiner STUART MCCOMMAS	Art Unit 4115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/21/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/21/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the limitation "the charge sharing" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Liang (WO 01/54108 A1), hereinafter referenced as Liang.

Regarding claim 1, Liang discloses a display device with a plurality of pixels arranged in rows n and columns m , wherein the pixels of a row can be selected through control lines, and with a row driver circuit for activating the n rows by means of a row voltage and with a column driver circuit for controlling the m columns with a column voltage, which voltages correspond to the image data of the pixels of the selected row to be displayed, and wherein it is provided upon a transition from a selected row n to another row $n+x$ that the row voltage is connected to an intermediate voltage level and

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the row $n+x$ is first connected to said intermediate voltage level and subsequently is charged up to the required row voltage. Specifically Liang discloses a display device with rows and columns and a plurality of pixels where the rows of pixels can be selected by control lines, where row drivers supply row voltages to select the rows and column drivers supply column voltages to the columns where the column voltages include image data for the image to be displayed with the selected row which reads on claimed "a display device with a plurality of pixels arranged in rows n and columns m , wherein the pixels of a row can be selected through control lines, and with a row driver circuit for activating the n rows by means of a row voltage and with a column driver circuit for controlling the m columns with a column voltage, which voltages correspond to the image data of the pixels of the selected row to be displayed" disclosed in page 1 lines 19-28 and in page 7 lines 22-27 and in page 10 lines 15-23 and in page 14 lines 30-33 and exhibited in figure 1 and in figure 3 and in figure 8. Liang further discloses that when a transition occurs on two rows the rows are connected to an intermediate voltage level which reads on claimed "and wherein it is provided upon a transition from a selected row n to another row $n+x$ that the row voltage is connected to an intermediate voltage level" disclosed in page 4 lines 13-19 and in page 10 lines 25-31 and in page 11 lines 1-19 and exhibited in figure 1 and in figure 3 and in figure 5. Liang further discloses that the second row is connected to the intermediate voltage level and then charged up to the required row voltage level which reads on claimed " and the row $n+x$ is first connected to said intermediate voltage level and subsequently is charged up to the required row voltage " disclosed in page 4 lines 13-19 and in page 10 lines 25-31

and in page 11 lines 1-19 and exhibited in figure 1 and in figure 3 and in figure 5.

Regarding claim 2, Liang discloses everything as applied above (see claim 1), in addition Liang discloses that a plurality of intermediate voltage levels is provided for the charge sharing, and the selected row can be coupled in steps to a first intermediate voltage level and subsequently to the further intermediate voltage levels up to the intermediate voltage level for the purpose of charge sharing. Specifically Liang discloses that a plurality of levels are provided for conserving power and sharing charge, and that the selected row is coupled in steps to intermediate voltage levels stored in capacitors and on another row up to an intermediate voltage level for sharing charge which reads on claimed "that a plurality of intermediate voltage levels is provided for the charge sharing, and the selected row can be coupled in steps to a first intermediate voltage level and subsequently to the further intermediate voltage levels up to the intermediate voltage level for the purpose of charge sharing" disclosed in page 4 lines 9-19 and in page 10 lines 7-31 and in page 11 lines 1-13 and exhibited in figure 3 and in figure 5.

Regarding claim 3, Liang discloses everything as applied above (see claim 1), in addition Liang discloses that the charge of the selected row n can be stored in a capacitor at the intermediate voltage level. Specifically Liang discloses that the charge of the row can be stored in a capacitor at the intermediate voltage level which reads on claimed " that the charge of the selected row n can be stored in a capacitor at the intermediate voltage level" disclosed in page 4 lines 1-33 and in page 5 lines 1-5.

Regarding claim 4, Liang discloses everything as applied above (see claim 1), in

addition Liang discloses that the maximum column voltage is used as the intermediate voltage level. Specifically Liang discloses that the maximum column voltage is an intermediate voltage level which reads on claimed "the maximum column voltage is used as the intermediate voltage level" disclosed in page 8 lines 21-33 and in page 17 lines 15-25 and exhibited in figure 2 and in figure 5.

Regarding claim 5, Liang discloses everything as applied above (see claim 1), in addition Liang discloses that the voltage corresponding to the intermediate voltage level is half the row voltage. Specifically Liang discloses that the intermediate row voltage is at half of the row voltage which reads on claimed "that the voltage corresponding to the intermediate voltage level is half the row voltage" disclosed in page 4 lines 13-19 and exhibited in figure 2 and in figure 5.

Regarding claim 6, Liang discloses everything as applied above (see claim 1), in addition Liang discloses that a switching unit is provided for first connecting the selected row n , and subsequently the next row $n+x$ to the intermediate voltage level. Specifically Liang discloses that a switching unit is provided for switching the first row and then a next row to the intermediate voltage level which reads on claimed "that a switching unit is provided for first connecting the selected row n , and subsequently the next row $n+x$ to the intermediate voltage level" disclosed in page 10 lines 7-31 and in page 11 lines 1-18 and exhibited in figure 3 and in figure 5.

Regarding claim 7, Liang discloses a method of controlling a display device with pixels arranged in rows n and columns m , wherein row voltages are supplied to the rows via control lines so as to select said rows, and wherein column voltages are

supplied to the columns m via data lines, and wherein the rows are consecutively selected, and in the case of a transition from a selected row n to another row $n+1$ the charge applied to the selected row n is transferred to an intermediate voltage level and the other row $n+1$ is first connected to said intermediate voltage level and is subsequently charged up to the required control voltage. Specifically Liang discloses a display device with rows and columns and a plurality of pixels where the rows of pixels can be selected by control lines, where row drivers supply row voltages to select the rows and column drivers supply column voltages to the data lines and where the rows are selected one row at a time which reads on claimed "a display device with pixels arranged in rows n and columns m , wherein row voltages are supplied to the rows via control lines so as to select said rows, and wherein column voltages are supplied to the columns m via data lines, and wherein the rows are consecutively selected" disclosed in page 1 lines 19-28 and in page 7 lines 22-27 and in page 10 lines 15-23 and in page 14 lines 30-33 and exhibited in figure 1 and in figure 3 and in figure 8. Liang further discloses that when a transition occurs on two rows a first selected row is connected to an intermediate voltage level and the other row is connected to an intermediate voltage level and then driven to a required control voltage which reads on claimed "and in the case of a transition from a selected row n to another row $n+1$ the charge applied to the selected row n is transferred to an intermediate voltage level and the other row $n+1$ is first connected to said intermediate voltage level and is subsequently charged up to the required control voltage" disclosed in page 4 lines 13-19 and in page 10 lines 7-31 and in page 11 lines 1-29 and exhibited in figure 3 and in figure 5.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STUART MCCOMMAS whose telephone number is (571)270-3568. The examiner can normally be reached on Monday-Friday (7:30-5:00 EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jefferey Harold can be reached on 571-272-7519. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stuart McCommas
Examiner
Art Unit 4115

SSM
/Ryan Yang/
Primary Examiner, Art Unit 2628